

New Course:
Revision of Course: February 1982
Information form:

Department: SOCIAL SCIENCES
Program:

D: **Weather and Climate**

C: **GEOGRAPHY 110**

Semester Credit

Subject & Course No.

Descriptive Title

Annual Description: This course introduces the student to meteorology. The concepts and radiation laws are used to explain atmospheric and oceanic circulation. Weather elements and patterns

severe weather, climate patterns and classification, as well as past and future climate change are studied. Plant and animal distribution patterns and their causes are examined along with some human impacts on the atmosphere and

biosphere

F, G, J, M, O, P

G: Type of instruction: Hrs per week / per semester | H: Course Prerequisites:

Lecture: 2 Hrs
Laboratory: 2 Hrs

NIL

Seminar: Hrs.
Clinical Experience: Hrs.
Field Experience: Hrs.
Practicum: Hrs.

Course Corequisites:

NIL

Student Directed Learning: Hrs.

Other (Specify)

Total: 4 Hrs.

K: Maximum Class Size:

35

Granted

College Credit No.:

Non-Credit

appropriate

With Geog 120 = SFU 1113 & EASO 1013

With Geog 120 = UBC 1016

UVIC 203B

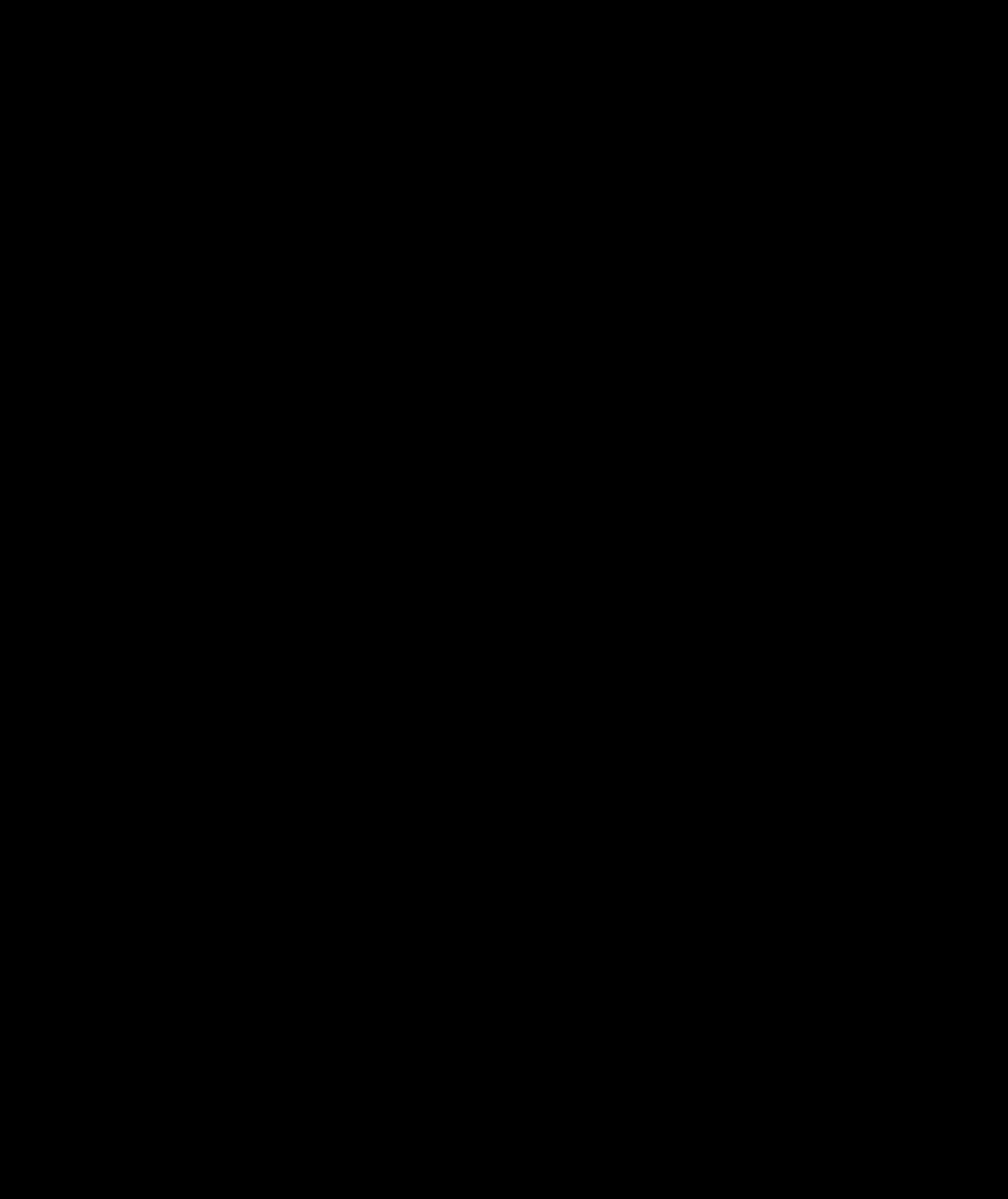
OTHER

Course Designer(s)

Divisional Dean

Registrar

Director/Chairperson



possible implications of, present and future anthropogenic-induced climate

ments, structure and energy flows of an ecosystem

the concepts of ecological stability and succession.

O. Course Objectives - cont'd

18. List, give evidence for, and change.

19. List and describe the common

vegetation types

B. COURSE CONTENT

1. Introduction to Physical Geography

the discipline of geography

Physical Geography

Climatology, Meteorology and Biogeography within Physical Geography
History and Development of Climatology, Meteorology and Biogeography

2. Energy Concepts

Kinetic, Potential, Nuclear, Radiant and Heat Energy
First and Second Law of Thermodynamics
Latent Heat and Sensible Heat

P. Course Content -- cont'd

S. Earth/Sun Relationships
Earth's Orbit About the Sun
Seasons

P. Course Content - cont'd

Air Masses

Fronts

- Stationary
- Warm
- Cold
- Occluded
- Convergent Lifting Mechanisms

Air-Mass-Weather
Air-Mass-Modification

Ingredients for Formation

Cyclogenesis and Essential
Structure
Dissipation

Interpretation of Surface Weather Maps

Acquisition of Weather Data

Weather Forecasting Using Surface Data

Weather Forecasting Using Satellite Data

12. Severe Weather

- Thunderstorms
- Tornadoes
- Hurricanes

13. Global Climate
Controls of Climate

Global Patterns
Classification Systems
Köppen

Thornthwaite

17. Climate Change

- Past Climate Change
 - Evidence
 - Possible Causes
- Current and Future Climate Change
 - Evidence
 - Air Quality
 - Urban Heat Island
 - Atmospheric Greenhouse Effect and Global Warming

Impacts

Potential

P. Course Content - cont'd

- 15. Ecosystems
Components
Structure

Energy Flows

16. Plant Growth
Growth Requirements

Biome

Biomes
Major Divisions

Relationships between climatic gradients and vegetation types

Q. METHOD OF INSTRUCTION

This course will employ a number of instructional methods to accomplish its objectives, including some of the following:

- Lectures
- Labs
- Field Work
- Seminar Presentations
- Slides, Videos
- Small Group Discussions

R. COURSE EVALUATION

The instructor will present the course content and will use a variety of instructional methods to accomplish its objectives, including some of the following:

- 1. Laboratory assignments with a combined value of up to 50%
- 2. Multiple choice and/or short answer tests with a combined value of up to 50%
- 3. Field work with a value of up to 20%
- 4. A term project with a value of up to 25%